



**A Type Catalog of Fossil Invertebrates
(Graptolithina) in the Yale Peabody
Museum**

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Abstract

Type material for 144 nominal species of fossil graptolites are in the Invertebrate Paleontology Collections of Yale University's Peabody Museum of Natural History. Primary types for 20 nominal species include 18 holotypes, and 11 syntypes (representing two nominal species). Secondary types for 3 nominal species include 3 paratypes. Tertiary types of 127 nominal species include 263 hypotypes. Most types are from Marathon (Texas) and New York State and have been described by W.B.N. Berry, O.M.B. Bulman and Rudolf Ruedemann.

Key Words

Type Catalog, Graptolithina, Yale Peabody Museum, Marathon, New York State, W.B.N. Berry, O.M.B. Bulman, Rudolf Ruedemann.

Introduction

This catalog lists all known fossil graptolite types in the Invertebrate Paleontology Collections housed in Yale University's Peabody Museum of Natural History. This is the fourth in a series of type catalogs of fossil invertebrates and is a product of an ongoing computerization project to improve the accessibility of the type collections.

Described specimens of *Climacograptus minimus* (Carruthers) (YPM 20384) and *Tetragraptus approximatus* Nicholson (YPM 20275) and the holotype of *Climacograptus jupiterensis* Twenhofel (YPM 35140) are missing and cannot be located. The collections have been thoroughly searched by the curatorial staff in the 1960s and 1980s and it is believed that these specimens are permanently lost. Any information on the whereabouts of these specimens would be greatly appreciated.

Organization

Specimens are listed under the originally described binomen; genera and species within genera are indexed alphabetically. Each entry includes the catalog number used by the Division of Invertebrate Paleontology prefixed with the abbreviation YPM and the type status of the original designation, followed by all known references to that name. Any subsequent designations are listed under the original designation and are cross-referenced in the body of the text. Locality descriptions follow each set of cataloged entries for each

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binomen. Errors and inconsistencies are footnoted after the locality description.

The type designations used are holotype and syntype for name bearers; paratype for secondary types; hypotype is used for all tertiary types. Name bearers and secondary types are defined as used in the *International Code of Zoological Nomenclature* (1985). Tertiary types or hypotypes are treated here as any described, figured or measured specimen used in a publication to augment the knowledge of a previously defined species, or any referred specimen that can not be placed unequivocally in a known species (e.g. *Anisograptus* sp.).

Locality descriptions follow each entry or set of entries with identical locality data. The locality information includes the stratigraphy, geography, collector and date. Stratigraphy has been standardized using *Stratigraphic Nomenclature Databases for the United States, its Possessions and Territories* (MacLachlan et al., 1992).

Catalog of Graptolithina

Adelograptus hunnebergensis? (Moberg)

HYPOTYPE YPM 20266

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.45,pl.5,f.2.[†]

Early Ordovician, Marathon Limestone, *Clonograptus* Zone. 83 ft above section IV base in a creek bed on the S side of U.S. highway 90, 1 mi W of Marathon RR station, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

[†]The image is reversed on pl.5,f.2.

HYPOTYPE YPM 20271

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.45,pl.5,f.8.

Early Ordovician, Marathon Limestone, *Clonograptus* Zone. Lower Marathon, 2 ft above section IX base, bearing S55E, 7.2 mi S53W of Marathon, 0.25 mi SE of Roberts Ranch road, 0.75 mi SW of where road turns SW past Alsate Creek, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

Adelograptus sp.

HYPOTYPE YPM 20267

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005, pl.5,f.3.

Early Ordovician, Marathon Limestone, *Clonograptus* Zone. Lower Marathon, 2 ft above section IX base, bearing S55E, 7.2 mi S53W of Marathon, 0.25 mi SE of Roberts Ranch road, 0.75 mi SW of where road turns SW past Alsate Creek, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

Amplexograptus cf. *perexcavatus* (Lapworth)

HYPOTYPE YPM 20358

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.86,pl.16,f.8,13.

Middle Ordovician, Woods Hollow Shale, *Climacograptus bicornis* Zone. 25 ft below Maravillas contact in a small anticlinal valley S of the Right Hand Shut Up in the SW quadrant of the Solitario, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

Anisograptus dissolutus Berry

HOLOTYPE YPM 20255

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.45,pl.4,f.5,6.

Early Ordovician, Marathon Limestone, *Anisograptus* Zone. Near nose of small fold, 0.125 mi SE of Loc. B7041, on SE limb of the Marathon anticlinorium on the SE side of Roberts Ranch road, 0.4 mi SW of where the road turns SW past Alsate Creek, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

Anisograptus sp.

HYPOTYPE YPM 20260

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.48,pl.4,f.3.

Early Ordovician, Marathon Limestone, *Anisograptus* Zone. Lower Marathon, 70 ft above Marathon base in section II, E side of gap between Marathon ridges, S55E of Roberts Ranch road, 9.5 mi S55W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 20261

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005, pl.4,f.3.

HYPOTYPE YPM 20264

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005, pl.4, f.9.

Early Ordovician, Marathon Limestone, *Anisograptus* Zone. 107 ft above section VIII base bearing S55E, SE side of Roberts Ranch road, 0.8 mi S of a cairn built where road turns SW of Alsate Creek, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Bryograptus crassus* Harris and Thomas**

HYPOTYPE YPM 20272

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005, p.47, pl.5, f.9.

Early Ordovician, Marathon Limestone, *Clonograptus* Zone. Lower Marathon, 478 ft above Marathon base in section I beginning on NW limb of a large fold, section bearing S65E, 4 mi SW of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Cardiograptus crawfordi* Harris**

HYPOTYPE YPM 20325

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005, p.65, pl.11, f.12.

Middle Ordovician, Fort Pena Fm, *Isograptus caduceus* Zone. 186 ft NW of Loc. B7007, 3.5 mi S50W of Pena Blanca Spring and 3.5 mi S87E of Woods Hollow Tank, E of highway 51, S of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Cardiograptus morsus* Harris and Keble**

HYPOTYPE YPM 20326

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005, p.66, pl.11, f.14.[†]

Middle Ordovician, Fort Pena Fm, *Isograptus caduceus* Zone. Near base of Fort Pena on an anticlinal ridge 1.625 mi S50E of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

[†]Incorrectly cited as YPM - Invertebrate Paleontology Locality Number B7017.

***Climacograptus bicornis* (Hall)**

HYPOTYPE YPM 20360

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005, p.79, pl.16, f.10.

HYPOTYPE YPM 20361

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005, p.79, pl.16, f.11.

HYPOTYPE YPM 20385

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005, p.79, pl.19, f.4.

Middle Ordovician, Woods Hollow Shale, *Climacograptus bicornis* Zone. 25 ft below Maravillas contact in a small anticlinal valley S of the Right Hand Shut Up in the SW quadrant of the Solitario, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 21266

Riva, J.F. and K.B. Ketner. 1989. Trans. Roy. Soc. of Edinburg: Earth Sci. v.80, p.78, ff.4b.

HYPOTYPE YPM 21267

Riva, J.F. and K.B. Ketner. 1989. Trans. Roy. Soc. of Edinburg: Earth Sci. v.80, p.78, ff.4c.

HYPOTYPE YPM 21268

Riva, J.F. and K.B. Ketner. 1989. Trans. Roy. Soc. of Edinburg: Earth Sci. v.80, p.78, ff.4d.

HYPOTYPE YPM 21269

Riva, J.F. and K.B. Ketner. 1989. Trans. Roy. Soc. of Edinburg: Earth Sci. v.80, p.78, ff.4e.

HYPOTYPE YPM 21270

Riva, J.F. and K.B. Ketner. 1989. Trans. Roy. Soc. of Edinburg: Earth Sci. v.80, p.78, ff.4f.

Ordovician, Normanskill Fm. On the Normans Kill at Kenwood, near Albany, Albany Co., New York, USA. Collector: Averill, H.

***Climacograptus hastatus* var. 4 Berry**

HYPOTYPE YPM 20377

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005, p.80, pl.20, f.11.

Berry, W.B.N. 1966. J. Paleont. v.40, n.1, p.171, pl.21, f.8.[†]

HYPOTYPE YPM 26904

Berry, W.B.N. 1966. J. Paleont. v.40, n.1, p.171, pl.21, f.7.^{††}

Late Ordovician, Maravillas Chert, *Dicellograptus complanatus* Zone. 0.5 inches below Caballos contact, section XV, on cliff rising above Picnic Grounds; 4.5 mi S34W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

[†]Incorrectly cited as pl.21,f.8.

^{††}Incorrectly cited as YPM 20377 on pl.21,f.7.

***Climacograptus jupiterensis* Twenhofel**

HOLOTYPE YPM 35140[†]

Twenhofel, W.H. 1928. Mem. Can. Geol. Surv. n.154,p.108,pl.2,f.1,2.

Ruedemann, Rudolf. 1947. Mem. Geol. Soc. Am. n.19,p.430,pl.74,f.1,2.

Silurian, Jupiter Fm, Jupiter Zone 4. Jupiter Cliff, Anticosti Island, Quebec, Canada. Collector: Twenhofel, W.H., 1909.

[†]A thorough search of the collections by the curatorial staff of the 1960s and 1980s could not locate this specimen. It is believed to be permanently lost.

***Climacograptus minimus* (Carruthers)**

HYPOTYPE YPM 20384[†]

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.80,pl.19,f.2.

Late Ordovician, Maravillas Chert, *Orthograptus quadrimucronatus* Zone. On top of ridge 0.5 mi E of the Picnic Grounds, 5 mi SSW of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

[†]A thorough search of the collections by the curatorial staff of the 1980s could not locate this specimen. It is believed to be permanently lost.

***Climacograptus n. sp. aff. C. medius* Tornquist**

HYPOTYPE YPM 24844

Ruedemann, Rudolf. 1947. Mem. Geol. Soc. Am. n.19,p.431,pl.73,f.49.

Middle Ordovician, Mictaw Grp. Outcrop 600 ft upstream from Loc. B0895, at bend below first camp, lower portion of Range VIII, Middle Branch, Port Daniel River, Quebec, Canada. Collector: Northrop, S.A., 1927.

***Climacograptus parvus* Hall**

HYPOTYPE YPM 20362

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.81,pl.16,f.12.

Middle Ordovician, Woods Hollow Shale, *Climacograptus bicornis* Zone. 10 ft above Loc. B7053, Payne Hills, 8.4 mi S of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Climacograptus riddellensis* Harris**

HYPOTYPE YPM 4003

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.82,pl.14,f.9,10.[†]

Late Ordovician, Gisbornian. Junction of Riddell's Creek and Jackson's Creek, Gisborne, Victoria State, Australia. Collector: Keble, R.A.

[†]Incorrectly cited as W. B. N. Berry Collection 46 (YPM - Invertebrate Paleontology Locality Number B5591).

***Climacograptus scharenbergi* Lapworth**

HYPOTYPE YPM 32844

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.82.

= *Climacograptus tubuliferus* Lapworth. Hypotype. Goldman, Daniel, Bergstrom, S.M. and C.E. Mitchell. 1995. Lethaia. v.28,tf.5c.

HYPOTYPE YPM 32845

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.82.

= *Climacograptus tubuliferus* Lapworth. Hypotype. Goldman, Daniel, Bergstrom, S.M. and C.E. Mitchell. 1995. Lethaia. v.28,tf.5b.

Late Ordovician, Maravillas Chert, *Orthograptus truncatus intermedius* Zone. 26 ft above Woods Hollow contact, section XV, on cliff rising above Picnic Grounds; 4.5 mi S34W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Climacograptus scharenbergi cf. stenostoma* Bulman**

HYPOTYPE YPM 20344

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.83,pl.15,f.6.

Middle Ordovician, Woods Hollow Shale, *Climacograptus bicornis* Zone. In a gulley 5.375 mi S73W of Maravillas Gap, W of highway 51 S of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Climacograptus* sp.**

HYPOTYPE YPM 20371

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005, pl.18,f.6.

Late Ordovician, Maravillas Chert, *Orthograptus quadrimucronatus* Zone. 77 ft below Caballos contact, section XVI, 2 mi N55E of Woods Hollow Tank on SE ridge face which forms the NW limb of the Dagger Flat anticlinorium. Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Climacograptus tubuliferus* Lapworth**

HYPOTYPE YPM 20386

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.83,pl.19,f.5.

Late Ordovician, Maravillas Chert, *Orthograptus quadrimucronatus* Zone. 250 ft below Caballos contact, 0.25 mi NE of Maravillas Creek at Maravillas Gap, W of highway 51, S of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

See also *Climacograptus scharenbergi* Lapworth and *Climacograptus typicalis* Hall.

***Climacograptus typicalis* Hall**

HYPOTYPE YPM 32843

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.83.

= *Climacograptus tubuliferus* Lapworth.

Hypotype. Goldman, Daniel, Bergstrom, S.M. and C.E. Mitchell. 1995. Lethaia. v.28,tf.5d.

Late Ordovician, Maravillas Chert, *Orthograptus truncatus intermedius* Zone. 20 ft above section XIV base, NW cliff at Rock House Gap, SW end of SE limb anticlinorium; 13.4 mi S46W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Climacograptus typicalis atlanticus* Twenhofel**

HOLOTYPE YPM 23322

Twenhofel, W.H. 1928. Mem. Can. Geol. Surv. n.154,p.109,pl.2,f.5,6,7.

Ruedemann, Rudolf. 1947. Mem. Geol. Soc. Am. n.19,p.441,pl.75,f.51-53.

Silurian, Becscie Fm, Becscie Zone 3. Wreck Beach, Anticosti Island, Quebec, Canada. Collector: Twenhofel, W.H., 1909.

PARATYPE YPM 20524

Twenhofel, W.H. 1928. Mem. Can. Geol. Surv. 154,p.109.

Silurian, Gun River Fm, Gun River Zone 10. Wreck Beach, Anticosti Island, Quebec, Canada. Collector: Twenhofel, W.H., 1919.

***Climacograptus typicalis crassimarginalis* Ruedemann and Decker**HYPOTYPE YPM 20363[†]

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.84,pl.17,f.1,2.

Late Ordovician, Maravillas Chert, *Orthograptus truncatus intermedius* Zone. 5 ft above Marvillas base, base of cliff face 0.25 mi NE of the Picnic Grounds, 5 mi SSW of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

[†]According to Goldman et al. (1995,p.119), they consider this locality to be suspect because the lithology of the matrix does not agree with the Maravillas Chert. Goldman et al. consider it likely to be from the Viola Springs formation of south central Oklahoma.

***Climacograptus?* sp.**

HYPOTYPE YPM 25051

Branisa, Leonard, G.A Chamot, W.B.N. Berry and A.J. Boucot. 1972. Spec. Pap. Geol. Soc. Am. n.133,p.25.

Silurian, Cordillera Real Fm. San Rogue mine, SW slope of Santa Vela Cruz, Canton Ichocu, Inquisivi, Bolivia.

***Clonograptus* cf. *tenellus* (Linnarson)**

HYPOTYPE YPM 20258

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.48,pl.4,f.1.

HYPOTYPE YPM 20259

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.48,pl.4,f.2.

Early Ordovician, Marathon Limestone, *Anisograptus* Zone. Lower Marathon, 70 ft above Marathon base in section II, E side of gap between Marathon ridges, S55E of Roberts Ranch road, 9.5 mi S55W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Clonograptus flexilis* (Hall)**

HYPOTYPE YPM 20277

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.47,pl.6,f.4.

Early Ordovician, Marathon Ls, Monument Spring Dol Mbr, *Tetragraptus approximatus* Zone. 51 ft above isoclinal folded Zone in section I beginning on NW limb of a large isoclinal fold, section bearing S65E, 4 mi SW of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Clonograptus persistens* Harris and Thomas**

HYPOTYPE YPM 20274

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.47,pl.5,f.11.

Early Ordovician, Marathon Limestone, *Clonograptus* Zone. Lower Marathon, 478 ft above Marathon base in section I beginning on NW limb of a large fold, section bearing S65E, 4 mi SW of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Clonograptus rigidus* (Hall)**

HYPOTYPE YPM 20273

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.48,pl.5,f.10.

HYPOTYPE YPM 20291

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.48,pl.5,f.15.

Early Ordovician, Marathon Limestone, *Clonograptus* Zone. Lower Marathon, 83 ft above base of section VI bearing S55E, SE of Roberts Ranch road 6.9 mi S53W of Marathon, 0.4 mi SW of where road turns SW past Alsate Creek, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Clonograptus* sp.**

HYPOTYPE YPM 20265

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005, pl.5,f.1.

Early Ordovician, Marathon Limestone, *Clonograptus* Zone. 115.5 ft above section IV base in a creek bed on the S side of U.S. highway 90, 1 mi W of Marathon RR station, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Corynoides calicularis* Nicholson**

HYPOTYPE YPM 20343

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.68,pl.15,f.5.

Middle Ordovician, Woods Hollow Shale, *Climacograptus bicornis* Zone. In a gulley 5.375 mi S73W of Maravillas Gap, W of highway 51 S of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Cryptograptus schaeferi* Lapworth**

HYPOTYPE YPM 20332

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.69,pl.12,f.7,8.

Middle Ordovician, Fort Pena Fm, *Hallograptus etheridgei* Zone. 26.08 ft below section XVIII top in bed of Alsate Creek, 3 mi W of Picnic Grounds and 6.1 mi S54W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Cryptograptus tricornis* Carruthers**

HYPOTYPE YPM 20347

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.70,pl.15,f.9.

Early Ordovician, Marathon Limestone, *Didymograptus protobifidus* Zone. 1058 ft NW of Loc. B7007, 3.5 mi S50W of Pena Blanca Spring and 3.5 mi S87E of Woods Hollow Tank E of highway 51, S of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Dendrograptus edwardsi* Ruedemann**

HYPOTYPE YPM 14167

Ruedemann, Rudolf. 1947. Mem. Geol. Soc. Am. n.19, pl.19,f.9.

HYPOTYPE YPM 14168

Ruedemann, Rudolf. 1947. Mem. Geol. Soc. Am. n.19,p.210,pl.19,f.7,8.

Late Cambrian. Tecoy quarry, 10 mi SW of Knoxville, Knox Co., Tennessee, USA. Collector: Moneymaker, B.C.

***Dendrograptus hallianus moneymaker* Ruedemann**

HOLOTYPE YPM 14166

Ruedemann, Rudolf. 1947. Mem. Geol. Soc. Am. n.19,p.212,pl.18,f.14,15.

Late Cambrian. Tecoy quarry, 10 mi SW of Knoxville, Knox Co., Tennessee, USA. Collector: Moneymaker, B.C.

***Dendrograptus kindlei* Ruedemann**

HYPOTYPE YPM 15846

Lochman, Christina. 1938. J. Paleont.
v.12,n.5,p.475,pl.57,f.41.

Early Ordovician, Cow Head Grp. Loc. 2 of
sketch map in notebook, Cow Head Peninsula,
western Newfoundland, Newfoundland, Canada.
Collector: Dunbar-Jr., C.O., Leith, E.I.,
Morris, P.A., 1933.

***Desmograptus northropi* Ruedemann**

HOLOTYPE YPM 13369

Ruedemann, Rudolf. 1947. Mem. Geol.
Soc. Am. n.19,p.221,pl.22,f.19,22. †

PARATYPE YPM 24843

Ruedemann, Rudolf. 1947. Mem. Geol.
Soc. Am. n.19,p.221,pl.22,f.20,21. ††

Middle Ordovician, Mictaw Grp. Boundary
between Ranges VII and VIII, Middle Branch,
Port Daniel River, Quebec, Canada. Collector:
Northrop, S.A., 1927.

†Incorrectly cited as a paratype for pl.22,f.22.

††Cited as cotype on p.221; incorrectly cited as the
holotype for pl.,f.21.

***Dicellograptus complanatus*
arkansasensis Ruedemann**

HYPOTYPE YPM 20383

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ.
Texas) Pub. n.6005,p.73,pl.20,f.2.

Late Ordovician, Maravillas Chert, *Dicellograptus*
complanatus Zone. 0.5 inches below Caballos
contact, section XV, on cliff rising above Picnic
Grounds; 4.5 mi S34W of Marathon, Brewster
Co., Texas, USA. Collector: Berry, W.B.N.

***Dicellograptus complanatus ornatus*
Elles and Wood**

HYPOTYPE YPM 20374

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ.
Texas) Pub. n.6005,p.74,pl.20,f.3.

Late Ordovician, Maravillas Chert, *Dicellograptus*
complanatus Zone. 0.5 inches below Caballos
contact, section XV, on cliff rising above Picnic
Grounds; 4.5 mi S34W of Marathon, Brewster
Co., Texas, USA. Collector: Berry, W.B.N.

***Dicellograptus divaricatus* (Hall)**

HYPOTYPE YPM 20350

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ.
Texas) Pub. n.6005,p.74,pl.15,f.12.

Middle Ordovician, Woods Hollow Shale,
Nemagraptus gracilis Zone. Outcrop on W side of
highway 51, 17.8 mi S of junction with US
highway 90, Brewster Co., Texas, USA.
Collector: Berry, W.B.N.

***Dicellograptus divaricatus salopiensis*
Elles and Wood**

HYPOTYPE YPM 20352

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ.
Texas) Pub. n.6005,p.74,pl.16,f.1.

Middle Ordovician, Woods Hollow Shale,
Climacograptus bicornis Zone. 57 ft below
Maravillas contact on Simpson Springs Mountain,
0.25 mi S17E of Simpson Springs, W of highway
51, S of Marathon, Brewster Co., Texas, USA.
Collector: Berry, W.B.N.

***Dicellograptus gurleyi* Lapworth**

HYPOTYPE YPM 20359

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ.
Texas) Pub. n.6005,p.75,pl.16,f.9.

Middle Ordovician, Woods Hollow Shale,
Climacograptus bicornis Zone. 57 ft below
Maravillas contact on Simpson Springs Mountain,
0.25 mi S17E of Simpson Springs, W of highway
51, S of Marathon, Brewster Co., Texas, USA.
Collector: Berry, W.B.N.

***Dicellograptus intortus* Lapworth**

HYPOTYPE YPM 20340

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ.
Texas) Pub. n.6005,p.75,pl.15,f.1.

Middle Ordovician, Woods Hollow Shale,
Nemagraptus gracilis Zone. 167.5 ft below
Maravillas contact, section XIII, 2.5 mi SW of the
Picnic Grounds on the NE bend of the ridge N of
Sunshine Springs, Brewster Co., Texas, USA.
Collector: Berry, W.B.N.

***Dicellograptus moffatensis alabamensis*
Ruedemann**

HYPOTYPE YPM 20348

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ.
Texas) Pub. n.6005,p.76,pl.15,f.10.

Middle Ordovician, Woods Hollow Shale,
Nemagraptus gracilis Zone. 65 ft above Woods
Hollow contact, 1.25 mi S84W of Pena Blanca
Spring, SE of Marathon, Brewster Co., Texas,
USA. Collector: Berry, W.B.N.

***Dicellograptus sextans exilis* Elles and Wood**

HYPOTYPE YPM 20349

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.77,pl.15,f.11.

Middle Ordovician, Woods Hollow Shale, *Nemagraptus gracilis* Zone. Outcrop on W side of highway 51, 17.8 mi S of junction with US highway 90. Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Dicellograptus smithi* Ruedemann**

HYPOTYPE YPM 16071

Ruedemann, Rudolf. 1947. Mem. Geol. Soc. Am. n.19,p.388.

Middle Ordovician, Mictaw Grp. Boundary between Ranges VII and VIII, Middle Branch, Port Daniel River, Quebec, Canada. Collector: Northrop, S.A., 1927.

HYPOTYPE YPM 20378

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.77,pl.15,f.3b.

Middle Ordovician, Woods Hollow Shale, *Climacograptus bicornis* Zone. 57 ft below Maravillas contact on Simpson Springs Mountain, 0.25 mi S17E of Simpson Springs, W of highway 51, S of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 27618

Ruedemann, Rudolf. 1947. Mem. Geol. Soc. Am. n.19, pl.65,f.10.

HYPOTYPE YPM 27619

Ruedemann, Rudolf. 1947. Mem. Geol. Soc. Am. n.19, pl.65,f.11.

HYPOTYPE YPM 27620

Ruedemann, Rudolf. 1947. Mem. Geol. Soc. Am. n.19, pl.65,f.12,13.

Middle Ordovician, Mictaw Grp. Boundary between Ranges VII and VIII, Middle Branch, Port Daniel River, Quebec, Canada. Collector: Northrop, S.A., 1927.

***Dichograptus marathonensis* Berry**

HOLOTYPE YPM 20257

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.51,pl.13,f.5.

Middle Ordovician, Fort Pena Fm, *Hallograptus etheridgei* Zone. E side of highway 51, 1.5 mi S of highway 90 junction, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Dichograptus octobrachiatus* Hall**

HYPOTYPE YPM 20289

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.51,pl.7,f.13.

Early Ordovician, Marathon Limestone, *Tetragraptus fruticosus* (4-br.) Zone. 98 ft above base of section V bearing S60E, crosses Roberts Ranch road 2.75 mi SW of where the road turns SW past Alsate Creek, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 20293

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.51,pl.8,f.2.

HYPOTYPE YPM 20302

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.51,pl.8,f.12.

Early Ordovician, Marathon Limestone, *Didymograptus protobifidus* Zone. Upper Marathon, 8 ft below fault and 10 ft below Loc. B5564, section XVIII, bed of Alsate Creek, 3 mi W of Picnic Grounds and 6.1 mi S54W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Dicranograptus brevicaulis* Elles and Wood**

HYPOTYPE YPM 20341

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.77,pl.15,f.2.

Middle Ordovician, Woods Hollow Shale, *Nemagraptus gracilis* Zone. Outcrop on W side of highway 51, 17.8 mi S of junction with US highway 90, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Dicranograptus caparroensis* Leith**

HOLOTYPE? YPM 15320

Leith, E.I. 1938. Am. J. Sci. ser.5,v.36, n.215,p.339,tf.8,9.†

Ordovician, Caparo-Bellavista series. First hill outside the Caparro River floodplain, about 3/4 S of the river along the trail between Santa Barbara and Mucuchachi, Andes Mountains, Venezuela. Collector: Terry, R.A.

[†]Although this specimen was described as two specimens and cited as cotypes in the explanation for tf.8 and 9, it has been determined that this is the part and counterpart of a single specimen, not "two incompletely preserved specimens" are described on page 339.

***Dicranograptus nicholsoni geniculatus* Ruedemann**

HYPOTYPE YPM 20367

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.77,pl.17,f.8.

Late Ordovician, Maravillas Chert, *Orthograptus truncatus intermedius* Zone. 26 ft above Woods Hollow contact, section XV, on cliff rising above Picnic Grounds; 4.5 mi S34W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Dicranograptus nicholsoni* Hopkinson**

HYPOTYPE YPM 20365

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.78,pl.17,f.6.

Late Ordovician, Maravillas Chert, *Orthograptus truncatus intermedius* Zone. 26 ft above Woods Hollow contact, section XV, on cliff rising above Picnic Grounds; 4.5 mi S34W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Dictyonema crassum* Girty**

SYNTYPE YPM 26998, 26999

Ruedemann, Rudolf. 1939. Wagner Free Inst. Sci. card5.

Ruedemann, Rudolf. 1908. Mem. New York St. Mus. n.11,p.165.

Girty, G.H. 1895. New York St. Mus., 48th Ann. Rpt., 1894 v.2,p.288.[†]

Early Devonian, Helderberg Grp. Shaly limestone, lower Helderberg, Clarkesville, Albany Co., New York, USA.

[†]Both 26998 and 26999 are marked with a Red Star denoting "type" status, however it can not be determined which specimen was used for the illustrations on pl.7,f.1,2.

***Dictyonema dumosus* Berry**

HOLOTYPE YPM 20251

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.45,pl.7,f.10.

Early Ordovician, Marathon Limestone, *Tetragraptus fruticosus* (4-br.) Zone. Upper Marathon, 41.17 ft below a fault which is 11.5 ft below Loc. B5569, section XVIII, bed of Alsate Creek, 3 mi W of Picnic Grounds and 6.1 mi S54W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Dictyonema flabelliforme anglica* Bulman**

HYPOTYPE YPM 28138

Ruedemann, Rudolf. 1947. Mem. Geol. Soc. Am. n.19,p.160,pl.2,f.1.^{††}

HYPOTYPE YPM 28139

Ruedemann, Rudolf. 1947. Mem. Geol. Soc. Am. n.19,p.160,pl.2,f.2.^{††}

Ordovician, Parsons Grp. Graptolite Zone. Mohawkian, W side West Bay or E shore of Long Point, Long Point, western Newfoundland, Newfoundland, Canada. Collector: Schuchert, C., 07/13/1918.

[†]Incorrectly cited as pl.2,f.2.

^{††}Pl.2,f.1,2 are views of two specimens, not views of a single specimen as stated in the plate explanation.

***Dictyonema jupiterense* Twenhofel**

HOLOTYPE YPM 20522

Twenhofel, W.H. 1928. Mem. Can. Geol. Surv. n.154,p.108,pl.1,f.5.

Ruedemann, Rudolf. 1947. Mem. Geol. Soc. Am. n.19,p.182,pl.5,f.32.[†]

Silurian, Jupiter Fm, Jupiter Zone 10. Jumpers, Anticosti Island, Quebec, Canada. Collector: Twenhofel, W.H., 1919.

[†]Incorrectly cited as pl.5,f.34.

***Dictyonema schucherti* Ruedemann**

HOLOTYPE YPM 14401

Shaw, A.B. 1962. J. Paleont. v.36,n.2,p.320.

Ruedemann, Rudolf. 1947. Mem. Geol. Soc. Am. n.19,p.164,pl.2,f.27-29.

Ruedemann, Rudolf. 1933. Bull. Milwaukee Pub. Mus. v.12,n.3,p.321,pl.54,f.1,2.

HYPOTYPE YPM 26366

Ruedemann, Rudolf. 1933. Bull. Milwaukee Pub. Mus. v.12,n.3,p.321.

Late Cambrian, Parker Slate. Top of Parker Fm, about 1 mi NW of Highgate Center, Franklin Co., Vermont, USA. Collector: Schuchert, C., 09/18/1922.

***Dictyonema* sp.**

HYPOTYPE YPM 20263

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005, pl.4,f.8.

Early Ordovician, Marathon Limestone, *Anisograptus* Zone. 3 ft above section IV base in a creek bed on the S side of U.S. highway 90, 1 mi W of Marathon RR station, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 20269

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005, pl.5,f.5.

Early Ordovician, Marathon Limestone, *Didymograptus protobifidus* Zone. Upper Marathon, 16 ft below fault and 18 ft below Loc. B5564, section XVIII, bed of Alsate Creek, 3 mi W of Picnic Grounds and 6.1 mi S54W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 20284

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005, pl.7,f.4.

Early Ordovician, Marathon Limestone, *Tetragraptus fruticosus* (4-br.) Zone. Upper Marathon, 41.17 ft below a fault which is 11.5 ft below Loc. B5569, section XVIII, bed of Alsate Creek, 3 mi W of Picnic Grounds and 6.1 mi S54W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Didymograptus artus* Elles and Wood**

HYPOTYPE YPM 20309

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.58,pl.10,f.2,6.

HYPOTYPE YPM 20312

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.58,pl.10,f.5.

Early Ordovician, Marathon Limestone, *Didymograptus bifidus* Zone. Upper Marathon, 14.5 ft below Marathon top, section XVIII, bed of Alsate Creek, 3 mi W of Picnic Grounds and 6.1 S54W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Didymograptus bifidus* (Hall)**

HYPOTYPE YPM 20310

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.59,pl.10,f.3.

Early Ordovician, Marathon Limestone, *Didymograptus bifidus* Zone. 14 ft below Alsate contact and 25 ft below Loc. B5550, low ridge SE of Roberts Ranch road, 0.5 mi SW of where the road turns SW past Alsate Creek, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 20313

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.59,pl.10,f.7.

Early Ordovician, Marathon Limestone, *Didymograptus bifidus* Zone. Upper Marathon, 2 ft below Marathon top, section XVIII, bed of Alsate Creek, 3 mi W of Picnic Grounds and 6.1 mi S54W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 20314

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.59,pl.10,f.9.

Early Ordovician, Marathon Limestone, *Didymograptus bifidus* Zone. 212 ft above base of section V bearing S60E, crosses Roberts Ranch road 2.75 mi SW of where the road turns SW past Alsate Creek, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 20315

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.59,pl.10,f.10.

Early Ordovician, Marathon Limestone, *Didymograptus bifidus* Zone. Upper Marathon, 14.5 ft below Marathon top, section XVIII, bed of Alsate Creek, 3 mi W of Picnic Grounds and 6.1 S54W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Didymograptus denticulatus* Berry**

HOLOTYPE YPM 20252

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.60,pl.10,f.12.

Early Ordovician, Marathon Limestone, *Didymograptus bifidus* Zone. Upper Marathon, 14.5 ft below Marathon top, section XVIII, bed of Alsate Creek, 3 mi W of Picnic Grounds and 6.1 S54W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Didymograptus extensus* (Hall)**

HYPOTYPE YPM 20278

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.60,pl.6,f.5.

Early Ordovician, Marathon Limestone, *Tetragraptus fruticosus* Zone. Upper Marathon, 22 ft above Monument Spring Mbr in section I beginning on NW limb of large isoclinal fold, section bearing S65E, 4 mi SW of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 20300

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.60,pl.8,f.10.

Early Ordovician, Marathon Limestone, *Didymograptus protobifidus* Zone. Upper Marathon, 8 ft below fault and 10 ft below Loc. B5564, section XVIII, bed of Alsate Creek, 3 mi W of Picnic Grounds and 6.1 mi S54W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Didymograptus mendicus* Keble and Harris**

HYPOTYPE YPM 20318

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.61,pl.11,f.3.

=*Keblograptus bidens* (Keble). Hypotype. Riva, J.F. 1992. Alcheringa. p.318, tf.2c-d.

Middle Ordovician, Alsate Shale, *Isograptus caduceus* Zone. 5 ft above Alsate base, section XVIII top in bed of Alsate Creek, 3 mi W of Picnic Grounds and 6.1 mi S54W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Didymograptus nitidus* Hall**

HYPOTYPE YPM 20301

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.61,pl.8,f.11.

Early Ordovician, Marathon Limestone. 3.25 mi ENE of the Buttrill Ranch, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Didymograptus nodosus* Harris**

HYPOTYPE YPM 20330

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.62,pl.12,f.3.

Middle Ordovician, Fort Pena Fm, *Hallograptus etheridgei* Zone. Roadcut 1.5 mi S of Marathon

on the road to the Picnic Grounds, 5 mi SSW of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Didymograptus novus* Berry**

HOLOTYPE YPM 20254

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.62,pl.5,f.6.

PARATYPE YPM 20270

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.62,pl.5,f.7.

Early Ordovician, Marathon Limestone. SE limb of a small drag fold at the end of section VIII, bearing S55E, SE side of Roberts Ranch road, 0.8 mi S of a cairn built where road turns SW past Alsate Creek, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Didymograptus pacificus* Ruedemann**

HYPOTYPE YPM 20319

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.63,pl.11,f.4.

Middle Ordovician, Woods Hollow Shale, *Isograptus caduceus* Zone. 18 ft above Fort Pena base, 2.5 mi N60W of Pena Blanca Spring, SE of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Didymograptus paraindentus* Berry**

HOLOTYPE YPM 20253

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.63,pl.11,f.1.

Middle Ordovician, Fort Pena Fm, *Isograptus caduceus* Zone. 0.375 mi SW of Loc. B7107, 2.5 mi N60W of Pena Blanca Spring, SE of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Didymograptus patulus* (Hall)**

HYPOTYPE YPM 20281

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.63,pl.6,f.9.

Early Ordovician, Marathon Limestone. On a rise 200 yards W of the Roberts Ranch road, 1.2 mi SW of where road turns SW past Alsate Creek, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Didymograptus protobifidus* Elles**

HYPOTYPE YPM 20295

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.63,pl.8,f.5.

Early Ordovician, Marathon Limestone, *Didymograptus protobifidus* Zone. Upper Marathon, 34-46 ft below Shatter Zone which is 9 ft below Loc. B5565, section XVIII, bed of Alsate Creek, 3 mi W of Picnic Grounds and 6.1 mi S54W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 20296

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.63,pl.8,f.6.

Early Ordovician, Marathon Limestone, *Didymograptus protobifidus* Zone. Upper Marathon, 16 ft below fault and 18 ft below Loc. B5564, section XVIII, bed of Alsate Creek, 3 mi W of Picnic Grounds and 6.1 mi S54W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 20297

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.63,pl.8,f.7.

Early Ordovician, Marathon Limestone, *Didymograptus protobifidus* Zone. Upper Marathon, 221.5 ft above Monument Springs Dol Mbr in section III, bearing S55E, beginning at 6.6 mi S55W of Marathon along Roberts Ranch road, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 20298

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.63,pl.8,f.8.

Early Ordovician, Marathon Limestone, *Tetragraptus approximatus* Zone. Above complex folded Zone, 329 ft above base of section III, bearing S55E, beginning 6.6 mi S55W of Marathon along Roberts Ranch road, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 20299

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.63,pl.8,f.9.

Early Ordovician, Marathon Limestone, *Didymograptus protobifidus* Zone. Upper Marathon, 16 ft below fault and 18 ft below Loc. B5564, section XVIII, bed of Alsate Creek, 3 mi W of Picnic Grounds and 6.1 mi S54W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Didymograptus v-deflexus* Harris**

HYPOTYPE YPM 20322

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.65,pl.11,f.9.

Middle Ordovician, Fort Pena Fm, *Isograptus caduceus* Zone. 0.375 mi SW of Loc. B7107, 2.5 mi N60W of Pena Blanca Spring, SE of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Diplograptus crassitestus* Ruedemann**

HYPOTYPE YPM 20376

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.84,pl.20,f.8.

Late Ordovician, Maravillas Chert, *Dicellograptus complanatus* Zone. 0.5 inches below Caballos contact, section XV, on cliff rising above Picnic Grounds; 4.5 mi S34W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Diplograptus minutus* Berry**

HOLOTYPE YPM 20256

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.85,pl.18,f.2,3.

Late Ordovician, Maravillas Chert, *Orthograptus quadrimucronatus* Zone. 77 ft below Caballos contact, section XVI, 2 mi N55E of Woods Hollow Tank on SE ridge face which forms the NW limb of the Dagger Flat anticlinorium, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Diplograptus multidens* Elles and Wood**

HYPOTYPE YPM 20353

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.85,pl.16,f.2.

Middle Ordovician, Woods Hollow Shale, *Climacograptus bicornis* Zone. 25 ft below Maravillas contact in a small anticlinal valley S of the Right Hand Shut Up in the SW quadrant of the Solitario, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Glossograptus hincksii* Hopkinson**

HYPOTYPE YPM 20381

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.71,pl.12,f.9a.

Middle Ordovician, Fort Pena Fm, *Hallograptus etheridgei* Zone. 17 inches below section XVIII top, in bed of Alsate Creek, 3 mi W of Picnic Grounds and 6.1 mi S54W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Glossograptus holmi* Bulman**

HYPOTYPE YPM 23329

Whittington, H.B. and R.B. Rickards. 1969. J. Paleont. v.43,n.3,p.802,pl.102,f.2.

Middle Ordovician, Table Head Grp. *Tetragraptus*
Zone of upper Table Head, Black(?) Cove, 2.5 mi
NE of the Gravels, Port au Port, western
Newfoundland, Newfoundland, Canada.
Collector: Dunbar, C.O. and party, 1933.

HYPOTYPE YPM 23331

Whittington, H.B. and R.B. Rickards. 1969.
J. Paleont. v.43,n.3,p.802,pl.102,f.1.

Middle Ordovician, Table Head Grp. From
Phyllograptus layer of upper Table Head,
Normanskill, 2.5 mi N of Port au Port, western
Newfoundland, Newfoundland, Canada.
Collector: Dunbar, C.O. and Edwards, W.S.,
07/11/1918.

***Glyptograptus austrodentatus*
americanus Bulman**

HYPOTYPE YPM 20334

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ.
Texas) Pub. n.6005,p.87,pl.13,f.2,3.

Bulman, O.M.B. 1963. Paleont. v.6,pt.4, p.683.

Middle Ordovician, Fort Pena Fm, *Halograptus*
etheridgei Zone. 96 ft above section X base
bearing S55E, 2.5 mi WSW of the Picnic Grounds
on SE side of Roberts Ranch road, SE of where
road turns SW past Alsate Creek, Brewster Co.,
Texas, USA. Collector: Berry, W.B.N.

***Glyptograptus cf. teretiusculus*
(Hisinger)**

HYPOTYPE YPM 20338

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ.
Texas) Pub. n.6005,p.87,pl.14,f.3,8.

HYPOTYPE YPM 20339

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ.
Texas) Pub. n.6005,p.87,pl.14,f.4,5.

Middle Ordovician, Fort Pena Fm, *Glyptograptus cf.*
G. teretiusculus Zone. NE face of a low ridge, 3.3 mi
N86W of the Picnic Grounds 5 mi SSW of Marathon,
Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Glyptograptus teretiusculus* (Hisinger)**

HYPOTYPE YPM 20356

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ.
Texas) Pub. n.6005,p.87,pl.16,f.5.

Middle Ordovician, Woods Hollow Shale,
Climacograptus bicornis Zone. 18 ft above Loc.
B7053, Payne Hills, 8.4 mi S of Marathon,
Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Glyptograptus teretiusculus euglyphus*
(Lapworth)**

HYPOTYPE YPM 20346

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ.
Texas) Pub. n.6005,p.88,pl.15,f.8.

Middle Ordovician, Woods Hollow Shale,
Climacograptus bicornis Zone. In a gulley 5.375
mi S73W of Maravillas Gap, W of highway 51 S
of Marathon, Brewster Co., Texas, USA.
Collector: Berry, W.B.N.

***Halograptus etheridgei* (Harris)**

HYPOTYPE YPM 20382

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ.
Texas) Pub. n.6005,p.95,pl.12,f.9b.

Middle Ordovician, Fort Pena Fm, *Halograptus*
etheridgei Zone. 17 inches below section XVIII
top, in bed of Alsate Creek, 3 mi W of Picnic
Grounds and 6.1 mi S54W of Marathon, Brewster
Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 31923

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ.
Texas) Pub. n.6005,p.95,pl.12,f.6.[†]

Early Ordovician, Darrwillian. Emu Creek, Bendigo
East, Victoria State, Australia. Collector: Harris, W.J.

[†]Incorrectly cited as W. B. N. Berry Collection 149
(YPM - Invertebrate Paleontology Locality
Number B7116).

***Halograptus mucronatus* (Hall)**

HYPOTYPE YPM 20357

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ.
Texas) Pub. n.6005,p.95,pl.16,f.6.

Middle Ordovician, Woods Hollow Shale,
Climacograptus bicornis Zone. 25 ft below
Maravillas contact in a small anticlinal valley S of
the Right Hand Shut Up in the SW quadrant of
the Solitario, Brewster Co., Texas, USA.
Collector: Berry, W.B.N.

***Haplograptus?* sp.**

HYPOTYPE YPM 14169

Ruedemann, Rudolf. 1947. Mem. Geol.
Soc. Am. n.19,p.264.

Late Cambrian. Tecoy quarry, 10 mi SW of
Knoxville, Knox Co., Tennessee, USA. Collector:
Money-maker, B.C.

***Isograptus caduceus divergens* Harris**

HYPOTYPE YPM 31919

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.66,pl.11,f.6.[†]

Early Ordovician, Darriwilian. Near Rocky Water Holes, S of Castlemaine, Victoria State, Australia. Collector: Keble, R.A.

[†]Incorrectly cited as W. B. N. Berry Collection 110 (YPM - Invertebrate Paleontology Locality Number B7073).

***Isograptus caduceus maxima* Harris**

HYPOTYPE YPM 20321

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.66,pl.11,f.8.

Middle Ordovician, Fort Pena Fm. *Isograptus caduceus*. Zone 2 inches above its Rodriguez Tank contact, 0.25 mi NW of Rodriguez Tank in the Solitario, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Isograptus caduceus maximo-divergens* Harris**

HYPOTYPE YPM 20324

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.67,pl.11,f.11.

Middle Ordovician, Fort Pena Fm. *Isograptus caduceus* Zone. 2 inches above its Rodriguez Tank contact, 0.25 mi NW of Rodriguez Tank in the Solitario, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Isograptus caduceus victoriae* Harris**

HYPOTYPE YPM 20320

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.67,pl.11,f.7.

Middle Ordovician, Fort Pena Fm. *Isograptus caduceus* Zone. 0.375 mi SW of Loc. B7107, 2.5 mi N60W of Pena Blanca Spring, SE of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Isograptus forcipiformis latus* Ruedemann**

HYPOTYPE YPM 20328

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.67,pl.12,f.1.

Middle Ordovician, Fort Pena Fm. *Hallograptus etheridgei* Zone. E side of highway 51, 1.5 mi S

of highway 90 junction, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Isograptus manubriatus* (Hall)**

HYPOTYPE YPM 31920, 31921

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.67,pl.11,f.5.[†]

HYPOTYPE YPM 31922

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.67,pl.12,f.4.^{††}

Early Ordovician, Darriwilian. Black Forest, Victoria State, Australia. Collector: Keble, R.A.

[†]Incorrectly cited as W. B. N. Berry Collection 110 (YPM - Invertebrate Paleontology Locality Number B7073).

^{††}Incorrectly cited as W. B. N. Berry Collection 111 (YPM - Invertebrate Paleontology Locality Number B7075).

***Keblograptus bidens* (Keble)**

HYPOTYPE YPM 16063

Riva, J.F. 1992. Alcheringa. p.318,tf.2c.

Middle Ordovician, Alsate Shale, *Isograptus caduceus* Zone. 5 ft above Alsate base, section XVIII top in bed of Alsate Creek, 3 mi W of Picnic Grounds and 6.1 mi S54W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

See also *Didymograptus mendicus* Keble and Harris.

***Leptograptus flaccidus trentonensis* Ruedemann**

HYPOTYPE YPM 20345

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.72,pl.15,f.7.

Middle Ordovician, Woods Hollow Shale, *Nemagraptus gracilis* Zone. 65 ft above Woods Hollow contact, 1.25 mi S84W of Pena Blanca Spring, SE of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Leptograptus* sp.**

HYPOTYPE YPM 20342

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005, pl.15,f.4.

Middle Ordovician, Woods Hollow Shale, *Nemagraptus gracilis* Zone. 65 ft above Woods Hollow contact, 1.25 mi S84W of Pena Blanca

Spring, SE of Marathon, Brewster Co., Texas,
USA. Collector: Berry, W.B.N.

***Loganograptus logani pertenuis*
Ruedemann**

HYPOTYPE YPM 20331

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ.
Texas) Pub. n.6005,p.50,pl.12,f.5.

Middle Ordovician, Fort Pena Fm, *Hallograptus*
etheridgei Zone. E side of highway 51, 1.5 mi S
of highway 90 junction, Brewster Co., Texas,
USA. Collector: Berry, W.B.N.

***Monograptus beecheri* Girty**

HYPOTYPE YPM 27000

Girty, G.H. 1895. New York St. Mus., 48th
Ann. Rpt., 1894 v.2,p.288,pl.4,f.4.

Ruedemann, Rudolf. 1908. Mem. New York
St. Mus. n.11,p.455,tf.435,437.

Ruedemann, Rudolf. 1939. Wagner Free
Inst. Sci. card 12,f.4.

HYPOTYPE YPM 27001

Girty, G.H. 1895. New York St. Mus., 48th
Ann. Rpt., 1894 v.2,p.288,pl.4,f.7.

Ruedemann, Rudolf. 1939. Wagner Free
Inst. Sci. card 12,f.7.[†]

HYPOTYPE YPM 27002

Girty, G.H. 1895. New York St. Mus., 48th
Ann. Rpt., 1894 v.2,p.288,pl.4,f.6.

Ruedemann, Rudolf. 1939. Wagner Free
Inst. Sci. card 12,f.6.

HYPOTYPE YPM 27003

Girty, G.H. 1895. New York St. Mus., 48th
Ann. Rpt., 1894 v.2,p.288,pl.4,f.8.

Ruedemann, Rudolf. 1908. Mem. New York
St. Mus. n.11,p.455,tf.436.

Ruedemann, Rudolf. 1939. Wagner Free
Inst. Sci. card 12,f.8.

HYPOTYPE YPM 27004

Girty, G.H. 1895. New York St. Mus., 48th
Ann. Rpt., 1894 v.2,p.288,pl.4,f.9,10.

Ruedemann, Rudolf. 1939. Wagner Free
Inst. Sci. card 12,f.9,10.

HYPOTYPE YPM 27005

Girty, G.H. 1895. New York St. Mus., 48th
Ann. Rpt., 1894 v.2,p.288,pl.4,f.11,12,13.

Ruedemann, Rudolf. 1908. Mem. New York
St. Mus. n.11,p.455,tf.438.

Ruedemann, Rudolf. 1939. Wagner Free
Inst. Sci. card 12,f.11,13.

HYPOTYPE YPM 27006

Girty, G.H. 1895. New York St. Mus., 48th
Ann. Rpt., 1894 v.2,p.288,pl.4,f.14.

Ruedemann, Rudolf. 1939. Wagner Free
Inst. Sci. card 12,f.14.^{††}

HYPOTYPE YPM 27007

Girty, G.H. 1895. New York St. Mus., 48th
Ann. Rpt., 1894 v.2,p.288,pl.4,f.5.

Ruedemann, Rudolf. 1939. Wagner Free
Inst. Sci. card 12,f.5.

HYPOTYPE YPM 27008

Girty, G.H. 1895. New York St. Mus., 48th
Ann. Rpt., 1894 v.2,p.288,pl.4,f.3.

Ruedemann, Rudolf. 1908. Mem. New York
St. Mus. n.11,p.458.

Ruedemann, Rudolf. 1939. Wagner Free
Inst. Sci. card 12,f.3.^{†††}

Early Devonian, Helderberg Grp. Shaly lime-
stone, lower Helderberg, Indian Ladder, Thatcher
State Park, Albany Co., New York, USA.
Collector: Beecher, C.E.

[†]Collection data indicate that YPM 27008
probably is the specimen illustrated as tf.7.

^{††}Collection data indicate that YPM 27008
probably is the specimen illustrated as tf.14.

^{†††}Collection data indicate that YPM 27008
probably is the specimen illustrated as tf.5.

***Monograptus clintonensis* (Hall)**

HYPOTYPE YPM 402

McLearn, F.H. 1924. Mem. Can. Geol. Surv.
n.118,p.34,pl.1,f.4.

Early Silurian, Ross Brook Fm. Coast section,
Arisaig, Antigonish Co., Nova Scotia, Canada.
Collector: Twenhofel, W.H., 1908.

HYPOTYPE YPM 403

McLearn, F.H. 1924. Mem. Can. Geol. Surv. n.118,p.34,pl.1,f.5.

HYPOTYPE YPM 404

McLearn, F.H. 1924. Mem. Can. Geol. Surv. n.118,p.34,pl.1,f.6.

Early Silurian, Ross Brook Fm. Zone d of McLearn, along shore, between Smith Brook and the new mouth of Arisaig Brook, SW of Arisaig Point, Arisaig, Antigonish Co., Nova Scotia, Canada. Collector: Twenhofel, W.H., 1908.

***Monograptus clintonensis* var. (Hall)**

HYPOTYPE YPM 14865

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.138,pl.9,f.6.

Middle Silurian, Niagaran, Gascons Fm. Just E of Marcil RR station, Quebec, Canada. Collector: Northrop, S.A., 1927.

***Monograptus colbiensis* Ruedemann**

HOLOTYPE YPM 26882[†]

Ruedemann, Rudolf. 1924. Am. J. Sci. ser.5,v.8,n.45,p.226.

Ruedemann, Rudolf. 1947. Mem. Geol. Soc. Am. n.19,p.476.

[†]The locality for this specimen is unknown. Ruedemann (1947) attributes the following locality to this species: "Horizon and Locality: Waterville shales. Old quarry about 2 miles north of Waterville and in ledge beside the road from Fairfield to Fairfield Center, about 3 miles north of Waterville, Maine." These localities were described in detail by Perkins (1924). However, there is no information with this specimen that suggests that either Ruedemann (1947) or Perkins' (1924) localities are where this specimen was collected. The specimen appears to be pyritized in a bluish-gray slate and according to Robert Nelson (personal communication, 1995), this specimen is probably from the "Old quarry about 2 miles north of Waterville" which is in the outskirts of the city limits of Waterville.

***Monograptus fritschi linearis* Boucek**

HYPOTYPE YPM 24996

Berry, W.B.N. 1967. J. Paleont. v.41,n.4, p.967,tf.1a.

HYPOTYPE YPM 24997

Berry, W.B.N. 1967. J. Paleont. v.41,n.4, p.967,tf.1b.

HYPOTYPE YPM 24998

Berry, W.B.N. 1967. J. Paleont. v.41,n.4, p.967,tf.1c.

HYPOTYPE YPM 24999

Berry, W.B.N. 1967. J. Paleont. v.41,n.4, p.967,tf.1d.

Late Silurian, McAdam Fm. Graptolite bed near top of sec., Zone c of McLearn, along shore, between the point at the E side of McDonald's Cove and McAdam Brook, SW of Arisaig Point, Arisaig, Antigonish Co., Nova Scotia, Canada. Collector: Twenhofel, W.H., 1908.

***Monograptus* sp.**

HYPOTYPE YPM 25842

Perkins, E.H. 1925. Am. J. Sci. ser.5,v.10, n.58,p.375.

Boucot, A.J. 1961. Bull. U.S. Geol. Surv. n.1111-E,p.170.

Early Devonian, Seboomunk Fm. Roadside cut in slate between Seboomunk and Rockwood about three mi S of "Y", where road branches for Pittston Farm, NWW of Moosehead Lake, Somerset Co., Maine, USA. Collector: Perkins, E.H., 07/1924.

***Monograptus wandalensis* Watney and Welch**

HYPOTYPE YPM 405

McLearn, F.H. 1924. Mem. Can. Geol. Surv. n.118,p.35,pl.1,f.7.

Late Silurian, McAdam Fm. Graptolite bed near top of sec., Zone c of McLearn, along shore, between the point at the E side of McDonald's Cove and McAdam Brook, SW of Arisaig Point, Arisaig, Antigonish Co., Nova Scotia, Canada. Collector: Twenhofel, W.H., 1908.

***Nemagraptus gracilis* (Hall)**

HYPOTYPE YPM 20351

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.73,pl.15,f.13.

Middle Ordovician, Woods Hollow Shale, *Nemagraptus gracilis* Zone. 65 ft above Woods Hollow contact, 1.25 mi S84W of Pena Blanca Spring, SE of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Oncograptus upsilon* Hall**

HYPOTYPE YPM 20323

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.68,pl.11,f.10.

HYPOTYPE YPM 20327

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.68,pl.11,f.15.

Middle Ordovician, Fort Pena Fm, *Isograptus caduceus* Zone. 0.375 mi SW of Loc. B7107, 2.5 mi N60W of Pena Blanca Spring, SE of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Orthograptus calcaratus* (Lapworth)**

HYPOTYPE YPM 20373

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.89,pl.18,f.9.

Late Ordovician, Maravillas Chert. 176 ft above Maravillas base, on a low ridge 3 mi NE of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Orthograptus calcaratus acutus* (Lapworth)**

HYPOTYPE YPM 20354

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.89,pl.16,f.3.

HYPOTYPE YPM 20355

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.89,pl.16,f.4.

Middle Ordovician, Woods Hollow Shale, *Climacograptus bicornis* Zone. Payne hills, 8.4 mi S75W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Orthograptus calcaratus incisus* (Lapworth)**

HYPOTYPE YPM 20364

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.90,pl.17,f.3.

HYPOTYPE YPM 20366

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.90,pl.17,f.7.

Late Ordovician, Maravillas Chert, *Orthograptus truncatus intermedius* Zone. 46 ft above Maravillas base on E slope of low hill 300 ft W of Loc. B7092, 5.375 mi S73W of Maravillas Gap, W of highway 51, S of Marathon, Brewster Co.,

Texas, USA. Collector: Berry, W.B.N.

***Orthograptus calcaratus vulgaris* (Lapworth)**

HYPOTYPE YPM 20372

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.90,pl.18,f.8.

Late Ordovician, Maravillas Chert, *Orthograptus quadrimucronatus* Zone. 77 ft below Caballos contact, section XVI, 2 mi N55E of Woods Hollow Tank on SE ridge face which forms the NW limb of the Dagger Flat anticlinorium, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Orthograptus quadrimucronatus* (Hall)**

HYPOTYPE YPM 20370

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.91,pl.18,f.1.

Late Ordovician, Maravillas Chert, *Orthograptus quadrimucronatus* Zone. 73 ft above section XIV base, NW cliff at Rock House Gap, SW end of SE limb of Marathon anticlinorium; 13.4 mi S46W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Orthograptus quadrimucronatus augustus* (Ruedemann)**

HYPOTYPE YPM 20369

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.91,pl.17,f.10a,11.

Late Ordovician, Maravillas Chert, *Orthograptus truncatus intermedius* Zone. 20 ft above section XIV base, NW cliff at Rock House Gap, SW end of SE limb anticlinorium; 13.4 mi S46W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Orthograptus quadrimucronatus* var. *cornutus* (Ruedemann)**

HYPOTYPE YPM 35967[†]

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.115.

=*Orthoretiograptus* sp. Goldman, Daniel, S.M. Bergström, and C. E. Mitchell. 1995. Lethaia. v.28,tf.5a.

Late Ordovician, Maravillas Chert, *Orthograptus truncatus intermedius* Zone. 26 ft above Woods Hollow contact, section XV, on cliff rising above Picnic Grounds; 4.5 mi S34W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

†A thorough search of the collections by the curatorial staff of the 1960s and 1980s could not locate this specimen. It is believed to be permanently lost.

***Orthograptus truncatus* var. *intermedius* (Elles and Wood)**

HYPOTYPE YPM 35966†

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.92,pl.17,f.4,5.

Late Ordovician, Maravillas Chert, *Orthograptus truncatus intermedius* Zone. 26 ft above Woods Hollow contact, section XV, on cliff rising above Picnic Grounds; 4.5 mi S34W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

†A thorough search of the collections by the curatorial staff of the 1960s and 1980s could not locate this specimen. It is believed to be permanently lost.

***Orthograptus truncatus socialis* (Lapworth)**

HYPOTYPE YPM 20375

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.93,pl.20,f.6.

Late Ordovician, Maravillas Chert, *Dicellograptus complanatus* Zone. 0.5 inches below Caballos contact, section XV, on cliff rising above Picnic Grounds; 4.5 mi S34W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Orthograptus whitfieldi* (Hall)**

HYPOTYPE YPM 35965†

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.93,pl.16,tf.7.

Middle Ordovician, Woods Hollow Shale, *Climacograptus bicornis* Zone. Payne hills, 8.4 mi S75W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

†A thorough search of the collections by the curatorial staff of the 1960s and 1980s could not locate this specimen. It is believed to be permanently lost.

***Orthoretiograptus* sp.**

See *Orthograptus quadrimucronatus* var. *cornutus* (Ruedemann).

***Phyllograptus anna* Hall**

HYPOTYPE YPM 20304

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.57,pl.8,f.14.†

Early Ordovician, Marathon Limestone, *Didymograptus protobifidus* Zone. Fault slice at the base of the N face of Threemile Hill, W of highway 51, S of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 20311

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.57,pl.10,f.4.

Early Ordovician, Marathon Limestone, *Didymograptus bifidus* Zone. Small anticline 2 mi N55E of Woods Hollow Tank E of highway 51, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

†Incorrectly cited as W. B. N. Berry Collection 53 (YPM - Invertebrate Paleontology Locality Number B5599).

***Phyllograptus anna longus* Ruedemann**

HYPOTYPE YPM 20305

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.57,pl.8,f.16.

Early Ordovician, Marathon Limestone, *Didymograptus protobifidus* Zone. Upper Marathon, 34-46 ft below shatter Zone which is 9 ft below Loc. B5565, section XVIII, bed of Alsate Creek, 3 mi W of Picnic Grounds and 6.1 mi S54W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Phyllograptus ilicifolius* Hall**

HYPOTYPE YPM 20294

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.57,pl.8,f.4.

Early Ordovician, Marathon Limestone, *Didymograptus protobifidus* Zone. Upper Marathon, 16 ft below fault and 18 ft below Loc. B5564, section XVIII, bed of Alsate Creek, 3 mi W of Picnic Grounds and 6.1 mi S54W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 20307

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.57,pl.9,f.2.

Early Ordovician, Marathon Limestone, *Tetragraptus fruticosus* (3 and 4-br.) Zone. Upper Marathon, 3.17 ft below a fault which is 11.5 ft below Loc. B5569, section XVIII, bed of Alsate Creek, 3 mi W of Picnic Grounds and 6.1 mi

S54W of Marathon, Brewster Co., Texas, USA.
Collector: Berry, W.B.N.

***Phyllograptus nobilis* Harris and Keble**

HYPOTYPE YPM 4004

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.57,pl.14,f.6.[†]

Early Ordovician, Darriwilian. Strathfieldsaye, Bendigo East, Victoria State, Australia. Collector: Harris, W.J.

HYPOTYPE YPM 4005

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.57,pl.14,f.7.[†]

Early Ordovician, Darriwilian. RR cut, Kohn's Road, Bendigo East, Victoria State, Australia. Collector: Keble, R.A.

[†]Both of these specimens are incorrectly cited as Collection 85 (YPM - Invertebrate Paleontology Locality Number B7043).

***Phyllograptus typus* Hall**

HYPOTYPE YPM 20308

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.58,pl.10,f.1.

Early Ordovician, Marathon Limestone, *Didymograptus bifidus* Zone. 3 ft below Alsate contact, roadcut on W side of highway 51, 1 mi N of the Buttrill Ranch road entrance, S of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 20316

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.58,pl.10,f.11.

Early Ordovician, Marathon Limestone, *Didymograptus bifidus* Zone. Small anticline 2 mi N55E of Woods Hollow Tank E of highway 51. Brewster Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 20317

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.58,pl.10,f.13.

Early Ordovician, Marathon Limestone, *Didymograptus bifidus* Zone. 3 ft below Alsate contact, roadcut on W side of highway 51, 1 mi N of the Buttrill Ranch road entrance, S of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Pseudoclimacograptus marathonensis* Clarkson**

HYPOTYPE YPM 20337

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.85,pl.14 f.2.[†]

Clarkson, C.M. 1963. Geol. Mag. v.100, n.4,p.352.

Middle Ordovician, Woods Hollow Shale, *Glyptograptus* cf. *G. teretiusculus* Zone. 3 mi N50E of Woods Hollow Tank and at mountain 4305 ft base, E of highway 51, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

[†]Incorrectly cited as pl.14,f.1,2.

***Pterograptus incertus* Harris and Thomas**

HYPOTYPE YPM 20329

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.51,pl.12,f.2.

Early Ordovician, Marathon Limestone, *Clonograptus* Zone. Lower Marathon, 264 ft above base of Marathon in section I, beginning on NW limb of a large fold, section bearing S65E, 4 mi SW of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Ptilograptus gaspensis* Ruedemann**

HOLOTYPE YPM 13368

Ruedemann, Rudolf. 1947. Mem. Geol. Soc. Am. n.19,p.246,pl.33,f.19.20.

Middle Ordovician, Mictaw Grp. Boundary between Ranges VII and VIII, Middle Branch, Port Daniel River, Quebec, Canada. Collector: Northrop, S.A., 1927.

***Ptilograptus plumosus* Hall**

HYPOTYPE YPM 20285

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.49,pl.7,f.6.

Early Ordovician, Marathon Limestone, *Tetragraptus fruticosus* (3 and 4br.) Zone. Upper Marathon, 592.83 ft above Marathon base, section II, E side gap between Marathon ridges, 2.9 mi SW of Roberts Ranch road where road turns SW past Alsate Creek, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Retiograptus geinitzianus* Hall**

HYPOTYPE YPM 20379

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.96,pl.15,f.3a.

Middle Ordovician, Woods Hollow Shale, *Climacograptus bicornis* Zone. 57 ft below Maravillas contact on Simpson Springs Mountain, 0.25 mi S17E of Simpson Springs, W of highway 51, S of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Retiograptus pulcherrimus* Keble and Harris**

HYPOTYPE YPM 20368

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.96,pl.17,f.9,10b.

Late Ordovician, Maravillas Chert, *Orthograptus truncatus intermedius* Zone. 20 ft above section XIV base, NW cliff at Rock House Gap, SW end of SE limb anticlinorium; 13.4 mi S46W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Retiolites geinitzianus venosus* (Hall)**

HYPOTYPE YPM 401

McLearn, F.H. 1924. Mem. Can. Geol. Surv. n.118,p.34,pl.1,f.8.

Early Silurian, Ross Brook Fm. Zone d of McLearn, along shore, between Smith Brook and the new mouth of Arisaig Brook, SW of Arisaig Point, Arisaig, Antigonish Co., Nova Scotia, Canada. Collector: Twenhofel, W.H., 1908.

***Tetragraptus amii* Lapworth**

HYPOTYPE YPM 20282

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.52,pl.6,f.10.

Early Ordovician, Marathon Limestone, *Tetragraptus fruticosus* (3 and 4-br.) Zone. Upper Marathon, 3.17 ft below a fault which is 11.5 ft below Loc. B5569, section XVIII, bed of Alsate Creek, 3 mi W of Picnic Grounds and 6.1 mi S54W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Tetragraptus approximatus* Nicholson**

HYPOTYPE YPM 20275†

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.52,pl.6,f.1.

HYPOTYPE YPM 20276

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.52,pl.6,f.2.

Early Ordovician, Marathon Ls, Monument Spring Dol Mbr, *Tetragraptus approximatus* Zone. 37-39

ft above isoclinal fold Zone in section I beginning on NW limb of a large isoclinal fold, section bearing S65E, 4 mi SW of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

†A thorough search of the collections by the curatorial staff of the 1960s and 1980s could not locate this specimen. It is believed to be permanently lost.

***Tetragraptus bigsbyi* (Hall)**

HYPOTYPE YPM 20287

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.53,pl.7,f.11.

Early Ordovician, Marathon Limestone, *Tetragraptus fruticosus* Zone. Bed of Dugout Creek, 1 mi N of the Roberts Ranch buildings, SW of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Tetragraptus decipiens* (Hall)**

HYPOTYPE YPM 20268

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.54,pl.5,f.4.

Early Ordovician, Marathon Limestone, *Clonograptus* Zone. Lower Marathon, 83 ft above base of section VI bearing S55E, SE of Roberts Ranch road 6.9 mi S53W of Marathon, 0.4 mi SW of where road turns SW past Alsate Creek, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Tetragraptus fruticosus* Hall**

HYPOTYPE YPM 20280

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.54,pl.6,f.7.

Early Ordovician, Marathon Limestone, *Tetragraptus fruticosus* (3 and 4-br.) Zone. Gully N of a water trough on a low ridge 0.5 mi N80W of Rodriguez Tank in the Solitario, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 20283

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.54,pl.6,f.11.

Early Ordovician, Marathon Limestone, *Tetragraptus fruticosus* (3 and 4-br.) Zone. Upper Marathon, 11.17 ft below a fault which is 11.5 ft below Loc. B5569, section XVIII, bed of Alsate Creek, 3 mi W of Picnic Grounds and 6.1 mi S54W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 20290

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.54,pl.7,f.14.

Early Ordovician, Marathon Limestone, *Tetragraptus fruticosus* (4-br.) Zone. 98 ft above base of section V bearing S60E, crosses Roberts Ranch road 2.75 mi SW of where the road turns SW past Alsate Creek, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 20292

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.54,pl.8,f.1.

HYPOTYPE YPM 20306

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.54,pl.9,f.3.

Early Ordovician, Marathon Limestone, *Didymograptus protobifidus* Zone. Upper Marathon, 8 ft below fault and 10 ft below Loc. B5564, section XVIII, bed of Alsate Creek, 3 mi W of Picnic Grounds and 6.1 mi S54W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 31924

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.54,pl.6,f.12.[†]

Early Ordovician, Bendigonian. Napoleon Line, Open cut, 200 ft S of Glasgow shaft, Bendigo, Victoria State, Australia. Collector: Keble, R.A.

HYPOTYPE YPM 31925

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.54,pl.8,f.3.^{††}

Early Ordovician, Bendigonian. Old Trench, 100 ft E of Glasgow shaft, Bendigo, Victoria State, Australia. Collector: Keble, R.A.

[†]Incorrectly cited as W. B. N. Berry Collection 27 (YPM - Invertebrate Paleontology Locality Number B5571).

^{††}Incorrectly cited as W. B. N. Berry Collection 115 (YPM - Invertebrate Paleontology Locality Number B7079).

***Tetragraptus pendens* Elles**

HYPOTYPE YPM 20286

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.55,pl.7,f.7.

Early Ordovician, Marathon Limestone,

Tetragraptus fruticosus Zone. Bed of Dugout Creek, 1 mi N of the Roberts Ranch buildings, SW of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Tetragraptus quadribrachiatus* (Hall)**

HYPOTYPE YPM 20288

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.55,pl.7,f.12.

Early Ordovician, Marathon Limestone, *Tetragraptus fruticosus* (3 and 4-br.) Zone. Upper Marathon, 592.83 ft above Marathon base, section II, E side gap between Marathon ridges, 2.9 mi SW of Roberts Ranch road where road turns SW past Alsate Creek, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Tetragraptus serra* (Brongniart)**

HYPOTYPE YPM 20279

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.56,pl.6,f.6.

Early Ordovician, Marathon Limestone, *Tetragraptus fruticosus* (3 and 4-br.) Zone. Upper Marathon, 3.17 ft below a fault which is 11.5 ft below Loc. B5569, section XVIII, bed of Alsate Creek, 3 mi W of Picnic Grounds and 6.1 mi S54W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 20380

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.56,pl.13,f.1 (upper right)

Middle Ordovician, Fort Pena Fm, *Hallograptus etheridgei* Zone. E side of highway 51, 1.5 mi S of highway 90 junction, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Tetragraptus taraxacum* Ruedemann**

HYPOTYPE YPM 20303

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.56,pl.8,f.13.[†]

Early Ordovician, Marathon Limestone, *Didymograptus protobifidus* Zone. Fault slice at the base of the N face of Threemile Hill, W of highway 51, S of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

[†]Incorrectly cited as Collection 53 (YPM - Invertebrate Paleontology Locality Number B5599).

***Tetragraptus?* sp.**

HYPOTYPE YPM 30829

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005, pl.13,f.1(lower left).

Middle Ordovician, Fort Pena Fm, *Halograptus etheridgei* Zone. E side of highway 51, 1.5 mi S of highway 90 junction, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Trigonograptus ensiformis* (Hall)**

HYPOTYPE YPM 20333

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.94,pl.12,f.10.

HYPOTYPE YPM 20335

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.94,pl.13,f.7.

HYPOTYPE YPM 20336

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.94,pl.13,f.6.

HYPOTYPE YPM 31945

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.94,pl.13,f.7.

Middle Ordovician, Fort Pena Fm, *Halograptus etheridgei* Zone. E side of highway 51, 1.5 mi S of highway 90 junction, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Triograptus cf. otagoensis* Benson and Keble**

HYPOTYPE YPM 20262

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005,p.48,pl.4,f.7.

Early Ordovician, Marathon Limestone. SE limb of a small drag fold at the end of section VIII, bearing S55E, SE side of Roberts Ranch road, 0.8 mi S of a cairn built where road turns SW past Alsate Creek, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

undet. *Dendroidea*

HYPOTYPE YPM 30830

Berry, W.B.N. 1960. Bur. Econ. Geol. (Univ. Texas) Pub. n.6005, pl.13,f.1(lower right).

Middle Ordovician, Fort Pena Fm, *Halograptus etheridgei* Zone. E side of highway 51, 1.5 mi S of highway 90 junction, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

***Undulograptus austrodentatus americanus* (Bulman)**

HYPOTYPE YPM 32847

Mitchell, C.E. 1994. Graptolite Res. Today. tf.1b.

Middle Ordovician, Fort Pena Fm. *Halograptus etheridgei* Zone, 1.25 mi S7W of Garden Springs and .125 mi W of abandoned section of highway between Ridge Springs and Garden Springs, E of highway 51, S of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

HYPOTYPE YPM 32855

Mitchell, C.E. 1994. Graptolite Res. Today. tf.1g.

HYPOTYPE YPM 32856

Mitchell, C.E. and Jorg Maletz.1995. Lethaia. tf.3j.

HYPOTYPE YPM 32858

Mitchell, C.E. 1994. Graptolite Res. Today. tf.1a.

Late Ordovician, Maravillas Chert, *Orthograptus truncatus intermedius* Zone, 26 ft above Woods Hollow contact, section XV, on cliff rising above Picnic Grounds; 4.5 mi S34W of Marathon, Brewster Co., Texas, USA. Collector: Berry, W.B.N.

Acknowledgements

John Riva and Charles Mitchell reviewed this manuscript. Many thanks to Brent Horstman for editing and formatting this catalog.

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